

DETAILED ACTION

1. This office action is in response to the amendment filed on 02/03/2011.
2. Claims 1, 3-15, 17-20, 31-34 are pending.

Response to Arguments

3. Applicant's arguments have been fully considered but are unpersuasive. For claims 1 and 15, applicant argues that the prior arts in combination do not disclose "dynamically updating the listing" by altering the indication of network portion capability of the second network. Examiner respectfully disagrees. Gopikanth clearly discloses the mobile station (MS) *continually* search for new PLMNs that may be more suitable for the MS ([0043]), including searching for its own home PLMN which may be unavailable when the MS is roaming. Gopikanth discloses that the MS routinely compile a list of PLMNs based on any factor such as roaming, power-up, or periodic check ([0037]). Gopikanth also discloses that a PLMN broadcasts its capabilities to the MS, which compiles the PLMN list with each PLMN and its capabilities *as detected* ([0038]). PLMN capabilities vary in time ([0038], *availability of services by the PLMNs with respect to time*). Therefore, Jorma and Gopikanth clearly disclose compiling a list of PLMNs with variable PLMN capabilities or altering network capabilities in a network list for a network already existing in the list.
4. For claims 32 and 34, applicant argues that the prior arts do not teach providing the altered indication of the network capability to another database in response to the selection of a radio access network. First of all, it is vague which radio access network

is referred to. Secondly, the limitation means that the altered network list at the mobile device is communicated to a (second or central) server after "a radio network" is selected at the mobile node, given that the radio network selected for communication is not required to be the altered radio access network. Whelan discloses a provider server, responsive to the selection of a radio access network, synchronizes the mobile unit association list with the server (fig. 1, col. 8 l. 36-40, roaming control server 12 synchronizes between mobile unit list 34 and central database association lists 16, upon changes of selected networks at the mobile unit AP list, col. 8, l. 7-9). Therefore, Gopikanth and Whelan clearly discloses providing the altered indication of the network capability to another database in response to the selection of a radio access network.

Claim Objections

5. Claim 1 recites "which of the network portions of the plurality of network portions" which is a grammatical error.
6. Claim 3 recites "the selected ones" and "the plurality of network parts" which lack antecedent basis.
7. Claim 4 recites "the selected message" and "the selected network portion" which lacks antecedent basis.
8. Claim 7 recites "the selected ones" which lacks antecedent basis.
9. Claim 8 recites "the at least selected ones" and "the broadcasts" which lack antecedent basis.

10. Claim 9 recites "at least selected values" which must be tied to "selected message" before.
11. Claim 32 recites on the last line "a radio access network" which should be "a radio access network". Same objection applies to claim 34. For claims 32-34, "the listing" in the first database and "the listing" in the second database should be distinct (e.g. first listing, second listing).
12. Numerous similar errors can be found in the claims. Appropriate correction is required.

Specification

13. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: lack of description of a "detector".

Claim Rejections - 35 USC § 112

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
15. Claims 1, 3, 5-14, 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim element “a detector” is a limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function. The specification does not provide any description of the term “detector” as including any hardware structure.

Claim element “a selector” is a limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function. The specification does not provide any description of the term “selector” as including any hardware structure.

16. Claims 34 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 34 discloses “a detector” and “a selector” and is rejected for the same rationale given above for claim 1.

Applicant may:

(a) Amend the claim so that the claim limitation will no longer be interpreted as a limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification and linked or associated to the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

17. Claims 34 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 34 recites "the receiver" which lacks antecedent basis and is indefinite whether or not being related to the detector and the selector. Appropriate correction is required.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 1, 3, 5-7, 9-15, 17-20, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorma et al. (EP 0,781,064 A2, hereafter Jorma, cited in IDS), in view of Gopikanth (US 2003/0129971)

20. For claim 1, Jorma discloses an apparatus for a radio communication system having a mobile node selectably operable at least to communicate packet data with a network part, the network part comprised of a plurality of network portions, a first network portion of the plurality forming a home network associated with the mobile node, said apparatus for at least facilitating selection of with which network portion of the plurality of network portions that the mobile node communicates, said apparatus comprising:

a storage element embodied at the mobile node, said storage element for storing values defining a database (fig. 24, *mobile device memory's database with service list*), the database forming a listing identifying at least the first network portion and a second network portion of the plurality of network portions together with an indication associated therewith of network-portion capability to provide packet data connectivity with the mobile node to communicate packet data therewith (col. 6 lines 16-31, *list of networks available at the mobile device that supports certain services or capabilities such as data services*), the listing dynamically updateable (abstract, *search and update network list with new networks*);

a selector adapted to access the database defined at said storage element, said selector for selecting through which of the network portions of the plurality of network portions to communicate the packet data, selection made by said selector at least in part dependent upon the listing formed of the database defined at said storage element (col. 5 lines 15-20, *select a packet data supported service from a list*).

Jorma does not disclose a detector coupled to the storage element and adapted to receive a message from the second network portion identifying values associated with the second network and to responsively alter the values stored in the storage element to alter the indication of network-portion capability of the second network portion in the listing when the message is of values indicating a second network-portion capability to be different than those indicated in the listing, thereby dynamically updating the listing; storing the altered values stored in the storage element.

Gopikanth discloses a detector coupled to the storage element and adapted to receive a message from the second network portion identifying values associated with the second network ([0021]-[0029], each PLMN can broadcast the system information with class of service or CoS) and to responsively alter the values stored in the storage element to alter the indication of network-portion capability of the second network portion in the listing when the message is of values indicating a second network-portion capability to be different than those indicated in the listing, thereby dynamically updating the listing ([0037]-[0039], [0043], mobile station MS compiles periodically a list of discovered PLMNs and their CoSs on top of a previous stored list of PLMNs and home PLMNs, [0037]-[0038], PLMNs capabilities are dynamically changing in time); and storing the altered values stored in the storage element ([0038], [0041], storing the discovered PLMNs in a list).

It would have been obvious to one skilled in the art at the time of the invention to update the network list of Jorma with newly discovered networks with capabilities as taught by Gopikanth. The motivation would be to choose a network that will meet the

bandwidth needs of the mobile station while efficiently utilizing bandwidth resource (Gopikanth, [0009]).

21. For claim 3, Jorma-Gopikanth further discloses the plurality of network parts each broadcasts messages to the mobile node, and wherein said detector selectably detects broadcasts of the messages by the selected ones of the plurality of network parts (Gopikanth, [0021]-[0029], each PLMN can broadcast the system information with class of service or CoS).

22. For claim 5, Jorma-Gopikanth further discloses the selected message broadcast by the selected network portion is further of values identifying the network portion from which the message is broadcast (Gopikanth, [0021]-[0029], fig. 3, PLMN ID).

23. For claim 6, Jorma-Gopikanth further discloses each network portion of the plurality of network portions is identified by an identification code and wherein the values identifying the network portion contained in the selected message comprises the identification code (Gopikanth, [0021]-[0029], fig. 3).

24. For claim 7, Jorma-Gopikanth further discloses the radio communication system comprises a cellular communication system operable generally pursuant to a GSM (Global System for Mobile communications) operating protocol that defines mobile country codes and mobile network codes and wherein the values identifying the network

portion contained in the selected message comprise a mobile country code and a mobile network code associated with the network portion from which the message is broadcast (Jorma, col. 2 lines 39-49, network ID comprises country codes and network codes, col. 8 line 24, GSM).

25. For claim 9, Jorma-Gopikanth further discloses said detector is further coupled to said storage element, said detector further for storing at least selected values that define the database at said storage element (Gopikanth, [0038]-[0039], storing networks at the MS).

26. For claim 10, Jorma-Gopikanth further discloses said detector further selectably removes values from the database defined at said storage element (Gopikanth, [0043]).

27. For claim 11, Jorma-Gopikanth further discloses the database defined at said storage element further indicates availability of the at least selected ones of the plurality of network portions through which to communicate the packet data (Jorma, fig. 9B, packet data service).

28. For claim 12, Jorma-Gopikanth further discloses the mobile node is further selectably for communicating voice data and wherein the listing formed of the database defined at said storage element further identifies the at least selected ones of the plurality of network portions together with an indication associated therewith of network-

portion capability to provide voice data connectivity with the mobile node to communicate voice data therewith (Jorma, fig. 12A, cellular network for voice).

29. For claim 13, Jorma-Gopikanth further discloses said selector is further selectably for selecting through which of the network portions of the plurality of network portions to communicate the voice data (Jorma, fig. 12A).

30. For claim 14, Jorma-Gopikanth further discloses the database forming the listing defined at said storage element is created by downloading thereto of a central database directory (Gopikanth, fig. 4, home PLMN provides PLMNs), the database selectably updatable thereafter (Jorma, col. 4, l. 40-50).

31. For claim 33, Jorma-Gopikanth further discloses the operation of receiving messages is further performed subsequent to the operation of storing and wherein the operations of receiving and storing are iteratively performed (Jorma, col. 4 lines 46-51, update a currently stored list, Gopikanth, [0037], [0043], search periodically).

32. For claim 15, the claim is rejected for the same rationale as in claim 1.

33. For claim 17, Jorma-Gopikanth further discloses said operation of detecting is further performed subsequent to said operation of storing and wherein said operations of detecting and storing are iteratively performed (Gopikanth, [0037]).

34. For claim 18, Jorma-Gopikanth further discloses the operation, prior to said operation, prior to said operation of detecting, of sending the messages to the mobile node (Gopikanth, ([0021]-[0029])).

35. For claim 19, Jorma-Gopikanth further discloses the messages detected during said operation of detecting are sent to the mobile node by selected network portions and wherein values contained in the messages are selectably stored during said operation of storing (Gopikanth, ([0021]-[0029], [0038]-[0039])).

36. For claim 20, Jorma-Gopikanth further discloses the messages detected during said operation of detecting identify the network portion capabilities of associated network portions of the selected network portions (Gopikanth, ([0021]-[0029])).

37. Claims 32, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gopikanth in view of Whelan et al. (US 7,606,242, hereafter Whelan).

38. For claim 32, Gopikanth discloses a method in a mobile node capable of packet data communication with a network part, for selecting a radio access network of a plurality of radio access networks in the network part, the network part storing values defining a first database in a central database and the mobile node storing values defining a second database in a storage element, the first and second databases each forming a listing identifying available radio access networks, including the first radio

access network and a second radio access network, of the plurality of radio access networks together with an indication associated therewith of radio access network capability to provide packet data communication with the mobile node, the method characterized by:

detecting messages received from the second radio access networks when the mobile device is not a party to a communication session ([0037], powering up or roaming), the messages having values identifying the radio access network capabilities of the second radio access network ([0021]-[0029]);

dynamically altering the indication of the second radio access network capability of the listing in the second database when a message is of values indicating the second radio access network capabilities to be different from those indicated in the listing in the second database ([0037]-[0039], [0043], mobile station MS compiles a list of discovered PLMNs and their CoSs on top of a previous stored list of PLMNs and home PLMNs);

selecting a radio access network from the available radio access networks for packet data communication based upon the listing in the second database formed in the second database defined during said operation of storing and altering ([0043], selecting a best PLMN).

Gopikanth does not disclose: providing the altered indication of the second radio access network capability to the listing in the first database in response to the selection of a radio access network.

In the same field of endeavor, Whelan discloses a provider server, responsive to the selection of a radio access network, synchronizes the mobile unit association list

with the server (fig. 1, col. 8 l. 36-40, roaming control server 12 synchronizes between mobile unit list 34 and central database association lists 16, upon changes of selected networks at the mobile unit AP list, col. 8, l. 7-9)

It would have been obvious to one skilled in the art at the time of the invention to apply synchronization of association lists of Whelan to Gopikanth. The motivation would be to keep databases of the mobile device and the central database synchronized.

39. For claim 34, Gopikanth discloses a mobile node capable of packet data communication with a network part configured to select a radio access network of a plurality of radio access networks in the network part, the network part storing values defining a first database in a central database and the mobile node configured to store values defining a second database in a storage element, the first and second databases each forming a listing identifying available radio access networks of the plurality of radio access networks together with an indication associated therewith of radio access network capability to provide packet data communication with the mobile node, the mobile node characterized by:

a detector coupled to the storage element, the receiver configured to receive messages from the second radio access network of the available radio access networks when the mobile is not a party to a communication session ([0014], fig. 3, step 2, initialization state or not in session), the messages having values identifying the radio access network capabilities of the second radio access network ([0021]-[0029]); the detector further configured to alter the indication of the second radio access network

capability of the listing in the second database when a message is of values indicating the second radio access network capabilities to be different from those indicated in the listing in the second database, the listing dynamically updateable ([0037]-[0039], [0043], mobile station MS compiles a list of discovered PLMNs and their CoSs on top of a previous stored list of PLMNs and home PLMNs).

a selector coupled to the detector and the storage element, the selector configured to select a radio access network from the available radio access networks for packet data communication based upon the listing in the second database formed in the second database defined in the storage element and the alteration made by the detector altering ([0043], selecting a best PLMN).

Gopikanth does not disclose: a provider, responsive to the selection of a radio access network, to provide the altered indication of the second radio access network capability to the listing in the first database.

In the same field of endeavor, Whelan discloses a provider server, responsive to the selection of a radio access network, synchronizes the mobile unit association list with the server (fig. 1, col. 8 l. 36-40, roaming control server 12 synchronizes between mobile unit list 34 and central database association lists 16, upon changes of selected networks at the mobile unit AP list, col. 8, l. 7-9)

It would have been obvious to one skilled in the art at the time of the invention to apply synchronization of association lists of Whelan to Gopikanth. The motivation would be to keep databases of the mobile device and the central database synchronized.

**40. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Gopikanth-Whelan, in view of Bridges et al. (US 2003/0186685, hereafter Bridges).**

41. For claim 31, Gopikanth-Whelan discloses a receive part configured to receive a central database listing (Gopikanth, fig. 4, home PLMN provides PLMNs). Gopikanth-Whelan does not disclose the central database listing having an identity of a network, a roaming indication.

Bridges discloses the same ([0085], download a PSL/IRDB from a central database to a mobile device, [0085], PSL/IRDB, system identification list, roaming, table 18 roaming indicator)

It would have been obvious to one skilled in the art at the time of the invention to apply central database for management of networks as in Bridges to the invention of Gopikanth-Whelan. The motivation would be to provide a central database that can manage subscriber's network information as taught by Bridges ([0074])

**42. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Jorma-Gopikanth, in view of Raghuram et al. (US 2004/0224689, hereafter
Raghuram).**

43. For claim 8, Jorma-Gopikanth does not disclose each network portion of the at least selected ones of the network portions broadcast the messages upon broadcast channels of a set of broadcast channels and wherein said detector further selectably

scans the broadcast channels of the set of broadcast channels to detect the broadcasts of the messages by the selected ones of the network portion.

Raghuram discloses the same ([0023])

It would have been obvious to one skilled in the art at the time of the invention to apply scanning all broadcast frequencies in order to detect new networks as in Raghuram to Jorma-Gopikanth and therefore take advantage of Raghuram's method such as saving battery power (abstract) by using best frequency bands.

Conclusion

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen can be reached on 571-272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HIEU HOANG/
Primary Examiner, Art Unit 2452